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PATENT  
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

## IN RE PATENT APPLICATION:

Usama Fayyad et al.

Serial No.: 09/700,606

Group Art Unit: 2121

TC 2100 CSO  
STATUS INQUIRY  
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Filed: January 31, 2001

Examiner: Not yet assigned

MAR 14 2002

Title: SCALABLE SYSTEMS FOR CLUSTERING OF  
LARGE DATABASES HAVING MIXED ATTRIBUTES

Initials: \_\_\_\_\_

Docket No.: 14-694 - 4254

Watts, Hoffmann, Fisher  
& Heinke Co., L.P.A.  
1100 Superior Ave., Ste. 1750  
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Assistant Commissioner for Patents  
Office of Initial Patent Examination's  
Customer Service Center  
Washington, D. C. 20231

MAR 14 2002

Technology Center 2100

STATUS REQUEST REGARDING CORRECTED FILING RECEIPT

Dear Sir:

A request for a corrected filing receipt was filed in the U.S. Patent Office on June 1, 2001, a copy of the submitted documents are enclosed. It is respectfully requested that the Patent and Trademark Office indicate when it will issue a corrected filing receipt.

Respectfully submitted,

Stephen J. Schultz  
Reg. No. 29,108Date Jan 7, 2002

I hereby certify that this paper is being deposited with the  
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on 1/7/02  
by Hasek Biernski

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PATENT APPLICATION

Attorney Docket No.: 14-6704  
Client: O I P E SCIBA

Patent No.: JUN 04 2001

Applicant(s): *Tessama Jayyad et al*  
Title: *Scalable System*, *Mixed Architecture*  
Serial No.: 09/700,051 Filed: 1/31/01 Initials: MB

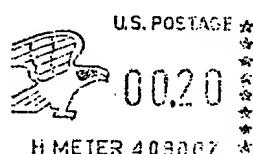
Mailing Date: *1/31/01*

Receipt is hereby acknowledged of the following:

- Transmittal (       pages)
- Provisional Application for Patent Cover Sheet
- Request for Filing a Patent Application under 37 CFR 1.53 (b) (       pages)
- Request for Filing a Patent Application under 37 CFR 1.53 (d) (       pages)
- Patent Application (       total pages)
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  - \_\_\_\_\_ pages of specification
  - \_\_\_\_\_ pages of \_\_\_\_\_ number of claims
  - \_\_\_\_\_ pages of abstract
- Drawings (       sheets)
- Declaration(s) with Power of Attorney (       pages)
- Check(s) in Amount of \$ \_\_\_\_\_

*Request for Action on filing Receipt - do not attach*

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WATTS, HOFFMANN, FISHER & HEINKE  
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& HEINKE CO., L.P.A.  
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CLEVELAND, OHIO 44114-2518

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**PATENT  
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

IN RE APPLICATION: Usama Fayyad et al.

Serial No. 09/700,606

Filed: January 31, 2001

Title: SCALABLE SYSTEM FOR CLUSTERING OF LARGE DATABASES HAVING MIXED ATTRIBUTES

Docket No. 14-694 - 4254

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1100 Superior Avenue, Ste. 1750  
Cleveland, Ohio 44114

Assistant Commissioner for Patents  
Office of Initial Patent Examination's  
Customer Service Center  
Washington, D.C. 20231

**REQUEST FOR CORRECTED FILING RECEIPT**

Sir:

As evidenced by the enclosed copy of page one of the specification, specifically, the first two paragraphs which have been highlighted for your convenience, and the enclosed copy of the Declaration and Power of Attorney, the correct domestic priority data as claimed by applicant should read as follows:

THIS APPLICATION IS A 371 OF PCT/US99/06717 03/29/1999

WHICH IS A CIP OF 09/083,906 05/22/1998

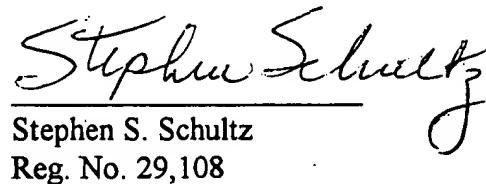
WHICH CLAIMS BENEFIT OF 60/086,410 05/22/1998

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DO 6/1/01  
BX: Mark Burashki

A copy of the original filing receipt is enclosed which shows the necessary corrections. A corrected filing receipt is respectfully requested.

Respectfully submitted,

  
Stephen S. Schultz  
Stephen S. Schultz  
Reg. No. 29,108

Date: June 1, 2001

Telephone: 216-241-6700  
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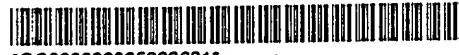
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COMMISSIONER FOR PATENTS  
UNITED STATES PATENT AND TRADEMARK OFFICE  
WASHINGTON, D.C. 20231  
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APPLICATION NUMBER	FILING DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	DRAWINGS	TOT CLAIMS	IND CLAIMS
09/700,606	01/31/2001	2121	1152	14-694-4254	8	34	4

CONFIRMATION NO. 8142

## FILING RECEIPT



Watts Hoffman Fisher & Heinke Company  
Suite 1750  
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Cleveland, OH 44114-2518

APR 27 2001

Date Mailed: 04/24/2001

Receipt is acknowledged of this nonprovisional Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please write to the Office of Initial Patent Examination's Customer Service Center. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the PTO processes the reply to the Notice, the PTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).

## Applicant(s)

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Paul S. Bradley, Seattle, WA;  
Cory A. Reina, Kirkland, WA;

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## Domestic Priority data as claimed by applicant

THIS APPLICATION IS A 371 OF PCT/US99/06717 03/29/1999  
 WHICH IS A CIP OF 60/083,906 05/01/1998  
 WHICH CLAIMS BENEFIT OF 60/086,410 05/22/1998

## Foreign Applications

05/22/98

Projected Publication Date: N/A

Non-Publication Request: No

Early Publication Request: No

## Title

Scalable system for clustering of large databases having mixed data attributes

Preliminary Class

700

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Data entry by : NGUYEN, SON

Team : OIPE

Date: 04/24/2001



A Scalable System for Clustering of Large Databases Having Mixed Data Attributes

Cross Reference to Related Applications

The present invention is a continuation in part of co-pending United States patent application serial number 09/083,906 entitled "A Scalable System for Expectation Maximization Clustering of Large Databases" to Fayyad et al having a filing date of May 22, 1998, and which is assigned to the assignee of the present application and is incorporated herein by reference.

Priority is claimed from provisional United States patent application serial number 60/086,410 filed May 22, 1998.

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Field of the Invention

The present invention concerns database analysis and more particularly concerns an apparatus and method for clustering of data into groups that capture important regularities and characteristics of the data.

Background Art

Large data sets are now commonly used in most business organizations. In fact, so much data has been gathered that asking even a simple question about the data has become a challenge. The modern information revolution is creating huge data stores which, instead of offering increased productivity and new opportunities, can overwhelm the users with a flood of information. Tapping into large databases for even simple browsing can result in a return of irrelevant and unimportant facts. Even people who do not 'own' large databases face the overload problem when accessing databases on the Internet. A large challenge now facing the database community is how to sift through these databases to find useful information.

Existing database management systems (DBMS) perform the steps of reliably storing data and retrieving the data using a data access language, typically SQL. One major use of database technology is to help individuals and organizations make decisions and generate reports based on the data contained in the database.

An important class of problems in the areas of *decision support* and *reporting* are clustering (segmentation) problems where one is interested in finding groupings (clusters) in the data. Data clustering has been used in statistics, pattern recognition,

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